

CLOVELLY

GOALS

1. Slow down rate of saltwater intrusion into EMU
2. Maintain the integrity of the relatively undisturbed brackish marsh area in the north and northeast section of the EMU by imposing mitigation conditions on any dredge and fill permits issued in this area that retard marsh deterioration
3. Reduce erosion of strip of land between Little Lake and eroded wetlands north of Bayou L' Ours
4. Reduce erosion of strip of natural levee of Bayou L'Ours running east - west between two rapidly eroding wetland areas
5. Maintain activities of L.O.O.P. and coordinate and support any mitigation plans developed for the area under their jurisdiction

This EMU is almost exclusively wetland, primarily brackish marsh. The EMU is varied in its marsh condition, erosion rates, and manmade activity stresses. The Louisiana Offshore Oil Port Clovelly Dome Storage Terminal as well as the L.O.O.P. and L.O.C.A.P. lines run through this EMU. These areas are covered as a "special area" with their own environmental management plan. The Bayou L'Ours natural levee system forms a narrow barrier with firmer soils between two of the most rapidly eroding areas in the Lafourche coastal zone. The brackish marsh in the northern portion of the EMU is in relatively good condition. In order to specify policies that reflect the different conditions extant throughout this EMU, the following areas have been sectioned off on the Habitat Flap Overlay for special policy statements:

1. The LOOP "Special Area" including the Clovelly Terminal and pipeline designation Area A
2. The southern subsided Bayou L'Ours strip of natural levee between the two trisecting canals: Area
3. Marsh buffer between the large open water area north of Bayou L'Ours. Little Lake on the north, bordered by the Tennessee Gas Pipeline Canal on the west and an Oil and Gas access canal on the east: Area C
4. The rapidly eroding and largely water areas north and south of the subsided section of Bayou L'Ours (R). The northern area is bordered by Area C to the north, oil and gas access canals to the east, the Tennessee Gas Pipeline Canal to the west. and the Bayou L'Ours natural levee Area R to the south: Area D. The southern area is bounded on the north by Bayou L'Ours (B), a series of oil and gas canals on the east, the Tennessee Gas Pipeline Canal to the west and the brackish marsh zone on the EMU border to the south: Area E.
5. The brackish marsh separating Bayou L'Ours on Little Lake from Brusle Lake and bounded on the east and west by pipeline canals (Tennessee Gas Pipeline to the west, Preton Canal to the east): Area F
6. The area north of a line running along the north bank of the Breton Canal from Little Lake to the Clovelly Dome and circumscribing the north boundary of the Clovelly Dome and then northwest along Superior Pipeline Cana.1 to Clovelly Farms then along the farm

levee to the EMU border. On the north, the EMU boundary forms the boundary (focally Canal). Little Lake marks the eastern boundary: Area IT.

7. The area from the channel of Bayou Laura (EMU boundary) to the end of the natural levee north to the Clovelly Dome and south to the north - south canal and the boundary of Area B. This area circumscribes the remnant natural levee forest and brushy vegetation where the ridge still extends above the marshland forming a barrier: Area H

POLICIES FOR THE CLOVELLY EMU

CLOVELLY EMU GENERAL POLICIES

POLICY 1. All General Policies for the Lafourche Coastal Zone shall apply in this EMU unless modified by specific EMU or sub-EMU policies stated in this EMU policy statement.

POLICY 2. Were not specified, spoil from new pipeline canals or oil and gas access canals should be spread out in ponded areas so as to create new marsh sites as a part of mitigation conditions for permits.

POLICY 3. There shall be no illegal dumping in this EMU of any liquid or solid waste. Existing tank storage sites and well sites shall follow all applicable guidelines as specified by the Louisiana Department of Natural Resources regarding the storing and disposal of wastes from mud pits, well pits, well construction, etc.

POLICY 4. Coordination mechanisms shall be established between L.O.O.P. and the Parish CZM Program to monitor waste discharge from the facility.

POLICY 5. Contiguous EMU's to Clovelly that border on sub-area as indicated in these policies shall be subject to those same policies and borders shall be constructed within respective EMU's within which those same policies should apply.

POLICY 6. Permanent human habitation dwellings should be discouraged throughout this EMU due to severe flooding potential from storms, and lack of adequate water and sewerage facilities. Any permits associated with recreational or any other type of permanent dwellings shall require adequate on site sewerage and proof of compliance with solid waste disposal and collection regulations of Lafourche Parish.

AREA A

POLICY 7. In Area A (L.O.O.P., Special Area) coordination mechanisms should be set up by the parish and L.O.O.P. so as to make maximum use of any mitigation or permitting measures attempted by either the parish or L.O.O.P. in or near the Special Area.

POLICY 8. In Area A the maintenance of spoil around all existing pipeline and oil and gas access canals should be encouraged of L.O.O.P. to retard erosion and saltwater into

the relatively intact marshes north and east of the pipeline corridor north of the Clovelly Dome facility.

AREA G

POLICY 9. In Area G. all oil and gas access canals open to Little Lake (running basically east - west) should have continuous spoil banks without openings placed and maintained by companies dredging the canal and/or owning the well.

POLICY 10. In Area G all existing pipeline canals should have a plug and be backfilled to marsh level as per General Policy 2 of the Lafourche Coastal Zone.

POLICY 11. In Area G. the Tennessee Gas and Texas Eastern Pipeline canals bisecting the Clovelly EMU and intersecting Little Lake could have dams and backfilling placed across them near to where they intersect Little Lake in the manner described in Policy 1 General Policies for the Lafourche Coastal Zone. Spoil for this project should come from mitigation measures imposed on dredging activities in or near the two channels and close to Little Lake. Maintenance of the structures should be as stated in Lafourche Coastal Zone General Policy 3.

POLICY 12. In Area G. all oil and gas access canals running north -south (or parallel to Little Lake) should place and maintain spoil banks as maintenance dredging takes place as per General Policy 3 of the Lafourche Coastal Zone.

POLICY 13. In Area G. the Superior Canal north from the Clovelly Dome should have a dam placed across it to retard saltwater intrusion into the marsh north of the dome. Methods outlined in General Policy 2 of the Lafourche Coastal Zone can be used to have this dam constructed.

POLICY 14. At the point at which the extension of Bayou Francois Lasseigne has been cut through the Bayou L'Ours Natural Levee (TESS, R22E, Section 58) a dam placed across the channel to retard saltwater intrusion has been broken. This dam should be rebuilt and spoil backfilled on either side as specified for pipeline canals in the General Policies to discourage such activities. Spoil may be obtained as elsewhere in these policies from mitigation conditions imposed on permits in the area.

AREA F

POLICY 15. In this area a thin strip of brackish marsh separates Brusle Lake from Little Lake at Bayou L'Ours. To retard the expansion of Little Lake into Brusle Lake, north - south canals for oil and gas extraction should be avoided wherever possible. If canals must be built, then they should not cut completely through the marshlands to either Brusle Lake or vice versa to Little Lake. Canals from either lake should have spoil banks continuously placed on both outside banks. Dams should also be placed and maintained at canal mouths to retard erosion as described in EMU Policy 4.

POLICY 16. Existing pipeline canals bisecting the marsh in Area F should be dammed and backfilled on both ends as per the method described in Lafourche Coastal Zone General Policy 2.

POLICY 17. Any dredging in both canals that form the boundary of Area F (Breton Canal and Tennessee Gas) should place spoil on the bank closest to this area. Dams and backfilling if possible should also be constructed on each canal in the manner outlined in Lafourche Coastal Zone General Policy 2.

AREA C

POLICY 18. Area C is much like Area F. A strip of brackish marsh land separates the large open water area north of Bayou L'Ours from Little Lake. Erosion of this area would cause the shoreline of Little Lake to expand to Bayou L'Ours. In order to reduce erosion potential, no oil and gas access canals should be dredged that completely bisect the area. Spoil from canals dredged from either side of this area should be placed continuously on both sides of the channel to retard erosion of this buffer strip.

POLICY 19. Existing pipeline canals through Area C should be dammed and backfilled using the same mitigation techniques as listed in Lafourche Coastal Zone General Policy 2.

POLICY 20. Along the Tennessee Gas Canal that forms the border for Areas F and C spoil should be placed on the east bank of the channel when the channel is dredged. The canal should also be plugged at Little Lake (Bayou L'Ours) and at the southwest border of Area C as indicated on the habitat overlay as described in Lafourche Coastal Zone General Policy 2.

AREAS D, E, & B.

POLICY 21. Areas D and E are the most rapidly eroding areas of the Lafourche Parish Coastal Zone with rates exceeding 400 acres. The marshlands in both areas have largely disintegrated and/or subsided becoming mostly shallow open water north and south of Bayou L'Ours. The subsided levee system of the bayou provided the only firm soils, that could act as a barrier to protect what is left of the marshland from joining with Little Lake. If this barrier is destroyed, waters of the Barataria Basin will impinge on Bayou Raphael or on the man-made South Lafourche Levee System itself. Therefore, it is recommended that no oil and gas access canals should be dredged across this strip of subsided levee delineated as Area B. If it is necessary to dredge a canal, it should not cut all the way through the levee, should be plugged at its mouth, and be backfilled with silts and clays taken in the dredging of the levee.

POLICY 22. Any dredging within a reasonable distance from the Bayou L' Ours Natural levee strip (Area B) in the open water zones of Area D and E should place spoil in any oil and gas backfilled canals dug under Policy 19 or along the levee strip itself to the

maximum extent practicable to help the strip maintain its integrity as a buffer against erosion.

POLICY-23, Any dredging of the oil and gas access canals marking the southeast boundary of Area E should require that spoil be placed on the west and northwest bank of the canal (i.e. the bank nearest the open water area of E to retard the spread of the water area to the southeast).

POLICY 24. Any dredging in or near the canal on the eastern boundary of Bayou L'Ours that breaches the natural levee system (Area B) Should require backfilling of this area, as well as dams on both sides of the levee ridge across the canal, as stated in EMU Policy 9. Material for the dams could be obtained from maintenance dredging or from mitigation techniques imposed on other permits in the area as stated in EMU Policy 9.

AREA H

POLICY 25. Area H is the upper portion of the west fork of Bayou L'Ours. The natural levee is high enough to act as a real barrier to water as well as support a thin strip of bottomland hardwood and upland brushy vegetation. This remnant levee ridge, along with Bayou Raphael to the west forms a barrier that protects the new South Lafourche levee system from the erosion progressing from Little Lake. To protect this barrier, oil and gas canals should not breach this ridge for any reason where tree vegetation exists. Board roads should be used to access any well sites on or near the levee system. Conditions for roads shall be as states in General Policy 7 for the Lafourche Coastal Zone.

POLICY 26. If pipeline canals must cross the Bayou L'Ours ridge, the canal should be backfilled with original materials dredged from the levee. The backfilled area should match former elevations and the area should be vegetated. A preferable pipeline laying would involve burial, not the dredging of a canal.

POLICY 27. The Tennessee Gas Canal which forms the western boundary of Area E and the eastern boundary of Area E should have spoil placed on the east bank of the canal when dredging takes place in the canal. The spoil should be in a continuous bank to serve as an erosion barrier. Any other dredge and fill activities that break the canal spoil bank should require that the bank be reconstituted after the activities.

Besides these guidelines, all coastal use guidelines as stated in the F.E.I.S. of the Louisiana Coastal Zone Management Program shall apply to this EMU

Where EMU policies refer to a "use of state concern". the policies are intended only as recommendations to the state program managers and are not legally binding on the permit applicant or the state CZM program.
